



**United States Environmental Protection Agency**

Region 4  
Atlanta Federal Center  
61 Forsyth St. SW, Atlanta, GA 30303-8960

April 12, 2001

4WD-OTS

**MEMORANDUM**

**SUBJECT:** Review of Corrective Measures Study (CMS) Work Plan for the Naval Support Activity Mid-South in Millington, Tennessee

**FROM:** Kay Wischkaemper, Hydrologist, P. G.  
Office of Technical Services

**TO:** Debbie Vaughn-Wright  
Remedial Project Manager  
BRAC Team  
Federal Facilities Branch

The review of the Corrective Measures Study (CMS) Work Plan for the Northside Loess Soil and Groundwater (Rev 1) for Naval Support Activity Mid-South in Millington, Tennessee has been performed as requested. The request date was through a memo dated 12/28/00 with a due date of January 29, 2001.

My comments are minor and none would result in a change in the strategy of the Work Plan.

1. I request that the report generated from this Work Plan be submitted in electronic format. Tabular data such as concentration data, well construction data, well and sample location data all be submitted in spreadsheet format.
2. Page 3-5, last paragraph: Did any soil excavation take place in the Voluntary Clean-up at SWMU 15?
3. Page 3-10, Section 3.3: Include maps for the summary of soils contamination data for SWMU's 5 and N-12. I don't have either of the RFI reports mentioned on page 3-10, but regardless a map should be included.
4. Table 3-1, Section 3.3.1, site-specific action levels for subsurface soils: I agree with the conclusion in this section concerning contaminated soils, but would like to include the site-specific action level for benzene included in Table 3-1.
5. Table 3-1: In the SSL column the number shown is "2" and the units at the top of the Table indicate ug/kg. This number should be corrected for two reasons: 1) The "2" is actually mg/kg and should be replaced with 80. 2) In Region 4 we do not use the "Migration to Groundwater" level for the DAF of 20. Instead, if the site conceptual model is consistent Soil Screening Level Guidance assumptions for using the Generic Soil Screening Levels, EPA Region 4 recommends using the

"Migration to Groundwater" level for DAF of 1 for use as a screening level. This is primarily due to the fact that dilution factors for sites in Region 4 fall below the DAF of 20.

6. Table 3-3: Correct the SSL column to read 80 (see comment 5 for explanation).
7. Page 3-14, 2<sup>nd</sup> paragraph: What compounds make up the "TPH" designation?
8. Page 3-14, last paragraph and Page 3-19, second paragraph, Soil Target Cleanup Levels: Is the TDEC clean-up level for TPH and benzene an ARAR? Without knowing the compounds in the TPH term I am concerned that maybe a mobile compound like naphthalene or a more toxic compound like Benzo(a)pyrene are the predominant compounds and the "migration to ground water" (DAF=1) Generic SSL is 400 ug/kg for Benzo(a)pyrene and 4000 ug/kg for naphthalene.
9. Page 3-14, 3<sup>rd</sup> paragraph: Do ground water concentrations at SWMU 15, for Total Petroleum Hydrocarbons (TPH) compounds, exceed the ground water protection standards? If not is soil remediation then based on human ingestion, inhalation and dermal contact? Do several rounds of ground water sampling results exist in order to evaluate TPH ground water trends?
10. Page 3-22, Section 3.3.2, Groundwater Contamination: The MCL for Benzene of 5 ug/L is the appropriate clean up goal.
11. Section 3.3.2, monitoring well locations: A map should be provided for each SWMU showing the monitoring well locations. A table should be provided with monitoring well construction details.
12. Page 3-23, first paragraph, post-removal samples from FFMW-8: In Appendix B I could not find the sample results for post-removal sampling.
13. Page 3-24, ground water remedy for SWMU 5: I concur with the approach proposed by the Navy at SWMU 5 but would like to extent the monitoring period to 2 years.
- 14.
15. Page 3-26, remedial action for UST-12 area: I concur with the approach proposed by the Navy at UST-12 area but would like to extent the monitoring period to 2 years.
16. Page 4-9, Section 4.3, Ground Water Corrective Measures: Provide a map of SWMU 15 and an estimated area for the plume.
17. Section A: The inclusion of the ASTM modeling standards is greatly appreciated.

These comments are meant to be helpful and feel free to contact me at X28641.

cc: Elmer Akin